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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,208	11/28/2001	Gregory W. Cox	CML00090N(69611)	1240
22242	7590	01/12/2006	EXAMINER	
FITCH EVEN TABIN AND FLANNERY 120 SOUTH LA SALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			PHILPOTT, JUSTIN M	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 01/12/2006

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/996,208
Filing Date: November 28, 2001
Appellant(s): COX ET AL.

Steven G. Parmelee
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 3, 2005 appealing from the Office action mailed June 23, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,532,217 to Alkhatib et al. in view of U.S. Patent No. 6,178,455 to Schutte et al.

Regarding claims 1-3, 8 and 11-13, Alkhatib teaches a method comprising a router (e.g., see "router" in col. 5, lines 25-27; see also col. 4, line 35 – col. 5, line 14 emphasizing use with routers): identifying active communication links (e.g., links between devices 72/74/76 and subnet 70 having communications thereon, see FIG. 2) to provide identified active communication links (e.g., see col. 5, lines 15-49 and FIG. 2 regarding devices 72/74/76 and

Art Unit: 2665

communication links to subnet 70; see also col. 3, lines 20-50 regarding identifying devices by communications between the devices); and automatically identifying whether the router needs a new address prefix (e.g., changing to a new subnet mask) for the identified active communication link (e.g., see col. 9, line 59 – col. 10, line 1 regarding changing the subnet mask for the link in order to provide a unique address, and see col. 3, lines 27-41 regarding a unique/new address is required in order to avoid conflicts in communication).

Further, regarding claim 8, Alkhatib teaches automatically identifying whether the router needs to support the identified active communication link (e.g., see col. 4, lines 35-53 wherein a routing table determines whether the router is to support the link, or if packets should be forwarded to another router).

However, Alkhatib may not specifically disclose the router has at least two interfaces and connects multiple communication links to one another.

Schutte, like Alkhatib, also teaches a method of routing and, specifically, teaches a router (e.g., router 101, see FIGS. 1 and 2) has at least two interfaces (e.g., 124 coupled to a WAN and 120 coupled to a LAN) and connects multiple communication links to one another (e.g., see col. 7, lines 28-46). The teachings of Schutte provides increased efficiency for address assignment in a network (e.g., see col. 3, line 28 – col. 4, line 11). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the routing teachings of Schutte to the routing method of Alkhatib in order to provide increased efficiency for address assignment in a network (e.g., see col. 3, line 28 – col. 4, line 11).

Regarding claims 4 and 14, Alkhatib teaches automatically determining whether the router needs to advertise a new address prefix for use by link endpoints (e.g., step 94 in FIG. 3A; see also col. 5, line 50 – col. 12, line 63, and specifically col. 10, lines 23-32).

Regarding claims 5, 6, 9 and 10, Alkhatib teaches automatically monitoring the identified active communication link for prefix advertisements from another router and determining when the router has not received a prefix advertisement from another router for the same active communication link within a predetermined period of time, wherein the router then needs to support the identified active communication link (e.g., see col. 9, line 39 – col. 11, line 45).

Regarding claims 7 and 15, Alkhatib teaches automatically determining whether the router needs to advertise an address prefix for use by link endpoints by soliciting at least one router to advertise (e.g., see col. 5, lines 50-59).

Regarding claim 16, Schutte teaches an address prefix (e.g., net ID 605 in FIG. 9) serves as a component of addresses on a communication link to allow endpoints and routers (e.g., router 101) to generate new addresses for use on that communication link, wherein the router needs a new address prefix when no address prefix has been previously established for the identified active communication link (e.g., see col. 3, line 65 – col. 4, line 11; see col. 24, line 11 – col. 25, line 42). As discussed above, the teachings of Schutte provides increased efficiency for address assignment in a network (e.g., see col. 3, line 28 – col. 4, line 11). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the routing teachings of Schutte to the routing method of Alkhatib in order to provide increased efficiency for address assignment in a network (e.g., see col. 3, line 28 – col. 4, line 11).

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alkhatib in view of Schutte, further in view of applicant's admitted prior art (AAPA).

Regarding claims 17 and 18, Alkhatib in view of Schutte teach the method discussed above regarding claims 4 and 8, however, may not specifically disclose a router advertises a prefix on an identified active communication link by sending a message containing the prefix to nodes present on the communication link. However, applicant admits such a step is well known in the art (see applicant's specification, page 5, lines 29-32, wherein applicant states, "prior art routers often advertise their address prefixes on their supported links to facilitate stateless autoconfiguration by endpoints"). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to configure the router to advertise a prefix on the identified active communication link by sending a message containing the prefix to nodes present on the communication link, since applicant admits that such a step is well known in the art and further provides the advantage of facilitating stateless autoconfiguration by endpoints. Further, applicant is reminded that applicant has relied upon the prior art teaching of RFC 2462 to provide enablement for the limitations in claim 17 (see Affidavit filed on February 14, 2005), and thus, applicant admits that RFC 2462 indicates these limitations are well known in the art.

Further, regarding claim 18, Schutte teaches the router (e.g., router 101) supports the active link by facilitating packet-forwarding activities between the communication links via the router (e.g., see col. 22, line 52 – col. 23, line 21). As discussed above, the teachings of Schutte provides increased efficiency for address assignment in a network (e.g., see col. 3, line 28 – col. 4, line 11). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the routing teachings of Schutte to the routing method of Alkhatib in order to

Art Unit: 2665

provide increased efficiency for address assignment in a network (e.g., see col. 3, line 28 – col. 4, line 11).

(10) Response to Argument

Summary:

Applicant's claimed invention is a router that identifies an active communication link, and identifies a need for a new address prefix for the link¹.

Applicant's primary arguments are: 1) that Alkhatib teaches only an endpoint and not a router, and 2) that Alkhatib teaches needing an existing address prefix/subnet mask instead of needing a new address prefix/subnet mask as recited in applicant's claims.

However, one of ordinary skill in the art would recognize that Alkhatib indicates that the relevant steps are in fact performed by a router (see "router" in col. 5, lines 25-27; see also col. 4, line 35 – col. 5, line 14 emphasizing use with routers). Additionally, one of ordinary skill in the art would also recognize that Alkhatib does in fact teach needing a new address prefix/subnet mask, whereby an *existing* address must be changed to comprise a new address prefix/subnet mask in order to avoid conflicts (see col. 9, line 59 – col. 10, line 1 regarding changing an address to comprise a new subnet mask; and see col. 3, lines 27-41 regarding needing the new address to avoid conflicts).

Response:

¹ Additionally, applicant's claimed router comprises at least two interfaces connecting multiple communication links to one another. However, this limitation is taught by the secondary reference of Schutte (col. 7, lines 28-46) and is further admitted by applicant to be well known in the art (specification, page 1, lines 9-18). Since applicant's Brief does not address this claim limitation it is not discussed any further herein, except for clarification purposes at the third paragraph of the Response below.

First, applicant argues (pages 7-9) that Alkhatib is directed to a non-router node, and *not* a router. Contrary to applicant's argument, however, Alkhatib recites that the device 76 comprises an interface 78 for communication means, and that the interface 78 may comprise "a router" (col. 5, lines 25-27; see also FIGURE 2). Furthermore, the remaining elements included in device 76, i.e., elements 80, 82 and 84, are a processor, memory and appliance functionality, respectively. Thus, one of ordinary skill in the art would recognize that the communication steps used for obtaining addressing information from the links on subnet 70 in accordance with the invention of Alkhatib, as performed by device 76, would be via interface 78 which couples device 76 to the subnet 70 (see FIGURE 2). Accordingly, one of ordinary skill in the art would recognize that the link and prefix-needing identifying steps of the invention of Alkhatib occur at interface 78. Also, not only does Alkhatib specifically state that this interface 78 may comprise a router (col. 5, lines 25-27), Alkhatib specifically emphasizes utilizing routers in the invention (col. 4, line 35 – col. 5, line 14), providing additional motivation to follow Alkhatib's suggestion that interface 78 comprise a router to perform the routing function of the invention. Finally, it is further noted that one of ordinary skill in the art would recognize that the steps in Alkhatib are advantageously performed by a router such as suggested by Alkhatib (col. 5, lines 25-27; col. 4, line 35 – col. 5, line 14), as opposed to being limited to a non-router endpoint, in order to couple a plurality of devices to the links for improved robustness and enhanced functionality.

Second, with respect to applicant's argument (page 9, last paragraph) that Alkhatib's teachings "presume the existence and availability of an existing subnet mask and hence a prefix portion of an address...", Examiner agrees with applicant that the subnet mask of Alkhatib corresponds to a "prefix portion" or address prefix of the claimed invention. Applicant continues

Art Unit: 2665

(first paragraph of page 10), however, stating, “should the network link to which Alkhatib’s new node is attached be unable to find a subnet mask that it can apply”, i.e., unable to find a unique address, “Alkhatib is utterly silent with respect to what, then, the new node might do”. With respect to this statement by applicant, it is noted herein that not only is Alkhatib *not* “utterly silent”, Alkhatib in fact provides the specific teaching recited in applicant’s claims. That is, Alkhatib specifically teaches that “if all the host numbers for the current subnet mask are taken, the system *changes* the subnet mask in step 112” (emphasis added) (col. 9, line 66 – col. 10, line 1). Accordingly, Alkhatib teaches automatically determining whether the device needs a new address prefix (i.e., subnet mask) for the identified active communication link as recited in applicant’s claims, wherein upon determining a unique address cannot be obtained with the existing subnet mask (after attempting to find a unique address with all possible host numbers) the subnet mask is changed to a new subnet mask in order to provide a unique address (col. 9, line 59 – col. 10, line 1). A unique address is “needed” to avoid conflicts in order to provide for link communications (col. 3, lines 27-41).

Third, applicant argues (page 10, line 15 through page 11, line 23) that Examiner has made an error in the Final Office Action mailed June 23, 2005, arguing that Examiner states Alkhatib is not relied upon for router teachings, which is inconsistent with the claim rejections. However, applicant is mistaken. Specifically, the statement made by Examiner and quoted by applicant (at Brief, page 10, last 4 lines) was made by Examiner in the Final Office Action in response to page 10, second paragraph of applicant’s arguments filed February 14, 2005 (see page 3, second paragraph of Final Office Action mailed June 23, 2005). In those initial arguments (February 14, 2005), applicant argues “Claim 1 was previously amended to specify

Art Unit: 2665

that the 'router' of claim 1 must have at least two interfaces and that it must serve to connect multiple communication links to one another" (page 10, second paragraph, Remarks, February 14, 2005). Since the rejection of the claims clearly relies upon Schutte, and *not* Alkhatib, to teach this claim limitation Examiner replied to this argument, stating, "Alkhatib is *not* relied upon for this particular teaching. ... Thus, applicant's argument that Alkhatib fails to teach such a claim limitation is moot" (page 3, second paragraph, Final Office Action, mailed June 23, 2005). Applicant's assertion that Examiner interprets Alkhatib inconsistently, to both comprise a router, and *not* comprise a router, is therefore mistaken. Examiner maintains, as discussed in more detail herein, that Alkhatib does in fact indicate, or at least strongly suggest, that the steps of the invention are performed by a router (e.g., see Alkhatib, col. 5, lines 25-27 and col. 4, line 35 – col. 5, line 14).

Fourth, applicant continues the above-mentioned argument stating that "the underlying basis for Examiner's suggestion regarding the obviousness of combining Alkhatib with Schutte is imaginary and utterly without support" (Brief, page 11, lines 20-22). In response to this statement, Examiner maintains that Schutte, like Alkhatib, also teaches a method of routing and, specifically, teaches a router (e.g., router 101, see FIGS. 1 and 2) having at least two interfaces (e.g., 124 coupled to a WAN and 120 coupled to a LAN), connecting multiple communication links to one another (e.g., see col. 7, lines 28-46), and which provides increased efficiency for address assignment in a network (e.g., see col. 3, line 28 – col. 4, line 11). At the time of the invention one of ordinary skill in the art would recognize the advantages of applying the routing teachings of Schutte to the routing method of Alkhatib in order to provide increased efficiency for address assignment in a network (e.g., see Schutte, col. 3, line 28 – col. 4, line 11). Still

Art Unit: 2665

further, Alkhatib suggests coupling the invention to prior art routers (e.g., see Alkhatib, col. 4, line 35 – col. 5, line 14); applicant even recognizes this fact (see Brief, page 13, lines 8-12).

Schutte teaches such a prior art router, and with further advantages of increased efficiency for address assignment in a network (e.g., see Schutte, col. 3, line 28 – col. 4, line 11). Accordingly, one of ordinary skill in the art would recognize motivation not only exists, but is strong, for combining the routing teachings of Schutte to the routing method of Alkhatib.

Fifth, applicant repeats the argument that Alkhatib “deal[s] with portions of a network address *other* than the prefix” (Brief, page 11, last paragraph). However, as discussed above, Alkhatib addresses the subnet mask (or address prefix) specifically in col. 9, line 66 – col. 10, line 1.

Sixth, applicant argues “identifying whether one ‘needs’ something is utterly distinct from, for example, simply noting the absence of something as is well supported by the present application” (Brief, page 12, lines 7-9). However, with respect to the word “needs” in applicant’s claims, applicant’s specification indicates that “needs” as used in applicant’s claims equates to being required in order to support link communications (e.g., see specification, page 5, lines 1-23). Thus, by Alkhatib requiring a change to a new subnet mask (col. 9, line 66 – col. 10, line 1), or address prefix, in order to provide a unique address to result in conflict-free communications (col. 3, lines 27-41), Alkhatib teaches “needing” a new address prefix which is consistent with the “needing/needs” recited in applicant’s claims and described in applicant’s specification.

Art Unit: 2665

Finally, applicant repeats the above arguments with respect to claims 8 and 11 (Brief, pages 12-15), and for the sake of brevity responses are not repeated herein, but reference can be made to the above response to address these arguments.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

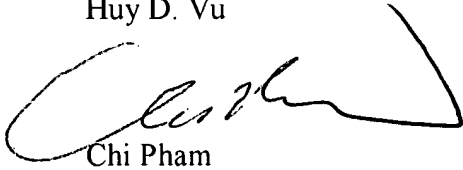
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


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